

QA: QA

**U.S. DEPARTMENT OF ENERGY
OFFICE OF QUALITY ASSURANCE**

**REPORT FOR AUDIT OCRWMC-BSC-04-01
PROCEDURE COMPLIANCE OF
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
AND
BECHTEL SAIC COMPANY, LLC
AT LAS VEGAS, NEVADA**

NOVEMBER 17 - 24, 2003

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EXECUTIVE SUMMARY

A team of auditors representing the Office of Quality Assurance (OQA) performed a compliance-based audit of the Office of Civilian Radioactive Waste Management (OCRWM) and the Bechtel SAIC Company, LLC (BSC) in Las Vegas, Nevada, from November 17 to 24, 2003. The audit scope included evaluation of the quality-affecting Administrative Procedures (AP) and Line Procedures (LP) that implement the OCRWM and BSC scope of work for compliance with the requirements described in DOE/RW-0333P, Revision 13, *Quality Assurance Requirements and Description* (QARD). The audit team evaluated the QARD; seven versions of AP-5.1Q, *Procedure Preparation, Review, and Approval*; four Technical Direction Letters (TDL) 02-021, 02-025, 03-017, 03-036; Policy POL-YMP-2002-003, *Maintenance of Requirements Traceability Network*; and three revisions of the Procedure Responsibilities Matrix.

The audit resulted in the following seven condition reports (CR). Similar conditions were grouped under a single CR to facilitate development of appropriate corrective action to preclude recurrences.

1. CR 1415- Inadequately addressed the QARD requirements in 6 of the 36 reviewed procedures.
2. CR1416 - Incorrect review criteria and incomplete review records.
3. CR 1417 - Requirements Traceability Network (RTN) 040 report contain errors on location of requirement.
4. CR 1418 - Mandatory comment not addressed, procedures not reviewed by U.S. Geological Survey (USGS) and Document Development Form did not include all Document Action Requests (DAR) incorporated.
5. CR 1419 - Procedures not reviewed by USGS, procedure not approved by approval authority, DAR not incorporated, no DAR initiated for interfacing procedure required to be effective concurrently.
6. CR 1420 - Procedure misidentified referenced procedure titles.
7. CR 1421 - Procedures not converted to LP-Qs.

The audit team concluded that the quality-affecting APs and LPs adequately implemented the QARD requirements. In addition, the team determined that AP-5.1Q was implemented in an overall satisfactory manner. However, the audit team found a number of conditions (documented on seven CRs), that indicate a lack of attention to detail in the implementation of procedural requirements. Overall, the audit team found that APs and LPs were adequate in addressing the QARD requirements.

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

A team of auditors from the OQA and BSC Quality Assurance (QA) performed a compliance-based audit of OCRWM and BSC procedures in Las Vegas, Nevada, from November 17 to 24, 2003. The audit scope included evaluation of quality-affecting APs and LPs that implement the OCRWM and BSC scope of work for compliance with the requirements and directives described in the following:

- QARD
- TDL 03-017, "Procedure Transition," and related TDLs 02-021, 02-025, and 03-036
- AP-5.1Q records packages including review records, comment resolution, and incorporation of accepted DAR
- RTN
- Policy POL-YMP-2002-003, *Maintenance of Requirements Traceability Network*
- Implementing documents containing notes with action steps

1.2 AUDIT TEAM AND OBSERVERS

Audit Team

Donald J. Harris, Navarro Quality Services (NQS)/Audit Team Leader

Samuel E. Archuleta, NQS/Auditor

John R. Doyle, NQS/Auditor

James E. Flaherty, NQS/Auditor

Joseph R. (Chip) Miller, BSC QA/Auditor

Christian M. Palay, NQS/Auditor

John E. Therien, BSC QA/Auditor

Observers

Robert Latta, U.S. Nuclear Regulatory Commission (NRC)/Senior Resident

Jack D. Parrott, NRC/Senior On-Site Licensing Representative

2.0 AUDIT DETAILS

A pre-audit meeting was held November 17, 2003, to brief management on the audit scope. The team held daily meetings with an NRC observer in attendance to discuss the progress and status of the audit, including potential adverse conditions. The Audit Team Leader held daily meetings to apprise OCRWM and BSC management of the audit issues and status. The Audit Team Leader conducted a post-audit meeting on November 24, 2003, to summarize the results of the audit.

Attachment A, Personnel Contacted During the Audit, lists the personnel contacted during the audit, including those who attended the pre- and post-audit meetings.

The records packages for the 36 evaluated procedures were obtained from the RISweb, Records Processing Center (RPC), and the BSC Policies, Plans and Program Procedures department. Each procedure records package was evaluated for the following:

- Incorporation of the QARD requirements, by comparing the procedure against the QARD, the RTN 040 report, *Implementations and the Requirements They Satisfy*, and when necessary, the RTN 006 report, *Detailed Requirements Matrix*. The RTN 040 reports were evaluated to determine if they reflected the QARD requirements to the appropriate subsection of the procedure in accordance with Policy POL-YMP-2002-003.
- Review records for completeness and compliance with the appropriate revision and ICN of AP-5.1Q.
- Reviewer comment sheets to ensure that all mandatory comments were dispositioned and that the reviewer concurred with the comment resolution.
- Incorporation of the DARs that were dispositioned as “accepted-action authorized.”
- Approval of the AP-Qs approval level was in accordance with the appropriate revision and ICN of AP-5.1Q, and TDLs 02-021, 02-025, 03-017, and 03-036, and the appropriate revision of the Procedure Responsibilities Matrix.
- Identification and listing on the Document Development Form, Section 2, Document Interface, of all procedures that interfaced with the procedure being revised, and a determination by the preparer if a listed document was required to be effective concurrently, and if so, that a DAR was generated.
- AP-Q procedures that have no involvement of DOE except DOE line oversight were converted to LP-Qs according to the Procedure Responsibilities Matrix.
- BSC LP-Q procedures were approved by the appropriate manager as indicated on the Procedure Responsibilities Matrix.
- AP-Q and LP-Q procedures approved after August 16, 2002, did not contain any notes with action steps.
- DOE line organization that is responsible for technical oversight of the work concurred with the work scope of the LP-Q revisions and ICNs.
- LP-Q procedures described responsibilities and processes used by a single organization or group within an organization.
- AP-Q procedures establish organizational interface control and processes performed by multiple affected organizations.

3.0 SUMMARY OF AUDIT RESULTS

The audit team concluded that, overall, the quality-affecting APs and LPs were adequate, and that the QARD requirements were incorporated as appropriate. In addition, the team determined that AP-5.1Q was implemented in an overall satisfactory manner. However, the audit team found a number of conditions (documented on seven CRs), that indicate a lack of attention to detail in the implementation of some procedural requirements.

The results of each procedure evaluation are summarized in Attachment B, Summary of Audit Results. The details of the audit, including the objective evidence reviewed, are documented in the audit checklist located in the RPC.

3.1 CONDITION REPORTS

3.1.1 Significant Conditions Adverse to Quality (Level A)

None.

3.1.2 Adverse Conditions (Level B)

3.1.2.1 CR 1415 – *Procedural Adequacy in Addressing QARD Requirements*

Of the 36 procedures sampled, the audit team found 12 instances of inadequately addressed QARD requirements in the following 6 specified implementing procedures.

Requirement: QARD Revision 13, Section 2.2.1, QA Program Documents

- B) Affected Organizations shall establish implementing documents applicable to their scope of work that translate QARD requirements into work processes. The following requirements apply to implementing documents.
1. Each Affected Organization shall establish a structured system of implementing documents that provides for top down implementation of the QARD or, if stipulated in procurement documents, shall work to the implementing documents of another Affected Organization.

Condition:

1. QARD Supplement, Section III.2.4, paragraph B.1, states that data shall be reviewed by individuals other than those who collected or reduced the data to ensure technical correctness. The RTN identifies AP-2.14Q, Revision 3, *Document Review*, as the procedure that implements this particular requirement. However, the applicability Section (2.0) of this procedure states that this procedure applies only if it is invoked by another OCRWM procedure or if directed by management. AP-2.14Q does not specify any criteria for reviewing data for technical correctness. The procedure allows additional specific criteria to be added at the discretion of the review coordinator, but no examples were identified. AP-SIII.3Q, Revision 2, *Submittal and Incorporation of Data/Technical Information to the Technical Data Management System*, requires that technical review of data be conducted using the criteria in

- AP-SIII.3Q, Attachment 9. AP-SIII.3Q does not require that the data be reviewed by individuals other than those who collected or reduced the data. AP-SIII.3Q does not reference AP-2.14Q for the technical review of data. If AP-2.14Q was referenced for implementation for the technical review of data using the criteria specified in Attachment 9, then that would comply with Supplement III, Section III.2.4, paragraph B.1. The lack of this procedural reference in AP-SIII.3Q renders the adequacy in meeting the requirement indeterminate.
2. QARD Supplement III, Section III.2.4, paragraph C.5, addresses the qualification of unqualified data using Technical Assessment. The RTN 007 report indicates that BSC is exempted from implementing this requirement. There was no objective evidence that an exemption was submitted to OQA for review as required by QARD Section 2.2.1, paragraph C.4.
 3. QARD Section 18.2.5, addresses audit team independence from any direct responsibility for performing any work being audited. The RTN 040 report indicates this requirement is implemented in AP-18.2Q, Revision 0, ICN 2, *Supplier Surveys/Audits*. The audit team concluded that this requirement was not adequately addressed in the procedure.
 4. QARD Section 2.2.5, addresses requirements for planning work. AP-3.13Q, Revision 3, ICN 2, *Design Control*, Section 5.1.1, paragraph a) states that successful implementation of the design process requires planning. The audit team concluded that restating the requirement does not implement the requirement. Furthermore, it is indeterminate how this requirement applies to AP-3.24Q.
 5. The audit team concluded that AP-3.12Q, Revision 2, ICN 1, *Design Calculations and Analyses*, does not adequately addresses the following QARD requirements:
 - Section 3.2.3, paragraph A. How the design analyses are planned
 - Section 3.2.3, paragraph E.5. The bases (or reference thereto) supporting application of the computer program to the specific physical problem be identified
 - Section 3.2.8, paragraph B. That design control measures for changes shall include provisions to assess the effect of the changes on the overall previously verified design and ensure that the design analyses for the item are still valid
 - Section 3.2.8, paragraph C. That the changes shall be approved by the same affected groups or organizations that approved the original design documents
 6. QARD Section 7.2.12, paragraph D.1 to D.4, addresses receipt of commercial-grade items. The RTN 007 report identifies this QARD section as being implemented by AP-7.7Q, Revision 2, ICN 0, *Acceptance of Items and Services*. The audit team could not confirm that this requirement was addressed by the procedure.

3.1.2.2 CR 1416 – Review Documentation Condition

The audit team found improper processing of review records instances in 22 of the 36 sampled procedures. Three of the conditions were corrected during the audit (CDA).

Requirement: AP-5.1Q, Revision 4, ICN 1, Section 5.3.1, paragraph 4, requires the Responsible Manager to select review criteria using Attachment 7, as a minimum.

Condition: The AP-5.1Q review records for AP-3.13Q, Revision 3, ICN 2, *Design Control*, AP-3.19Q, Revision 2, ICN 4, *Specifications*; and AP-3.24Q, Revision 1, ICN 1, *Drawings*, specified the review criteria used for the review as coming from Attachment 5 of AP-5.1Q. The review records were corrected during the audit to reference Attachment 7 rather than Attachment 5. The audit team verified the review record correction.

Requirement: AP-5.1Q, Revision 4, ICN 0 or newer, Attachment 10, requires that the Preparer complete blocks 20 and 21 of the AP-5.1Q Review Record if there were comments, or mark “N/A” in both blocks if there were no comments.

Condition: Blocks 20 and 21 of AP-5.1Q review records for the following 12 procedures have neither the preparer’s printed name and date, nor were the blocks marked “N/A”:

- AP-2.1Q, Revision 3, ICN 0, *Personnel Training and Qualification* (CDA and verified)
- AP-6.1Q, Revision 7, ICN 2, *Document Control*
- AP-9.3Q, Revision 0, ICN 1, *Qualification and Certification of Nondestructive Examination Personnel* (CDA and verified)
- AP-SI.1Q, Revision 5, ICN 2, *Software Management*
- AP-SI.2Q, Revision 1, ICN 1, *Qualification of Level A Software*
- AP-SI.3Q, Revision 1, ICN 1, *Software Independent Verification and Validation*
- AP-SI.4Q, Revision 0, ICN 2, *Independent Verification and Validation of Legacy Code*
- AP-SV.1Q, Revision 1, ICN 0, *Control of the Electronic Management of Information*
- AP-SIII.1Q, Revision 2, ICN 0, *Scientific Notebooks*
- AP-SIII.2Q, Revision 1, ICN 1, *Qualification of Unqualified Data*
- AP-SIII.3Q, Revision 2, ICN 0, *Submittal and Incorporation of Data/Technical Information to the Technical Data Management System*
- AP-SIII.4Q, Revision 0, ICN 5, *Development, Review, Online Placement, and Maintenance of Individual Reference Information Base Data Items*

Requirement: AP-5.1Q, Revision 3, ICN 4, Section 5.5.5, paragraph C, requires the reviewer to indicate acceptance of responses to the mandatory comments.

Condition: There was no objective evidence of reviewer acceptance for any of the comments from the Projects Organization on the draft of AP-3.15Q, Revision 4, ICN 2, *Managing Technical Product Inputs*.

Requirement: AP-5.1Q, Revision 3, ICN 4, Attachment 10, requires that the reviewer complete blocks 27, 28, and 29, on the review record.

Condition: For the following six procedures, blocks 27, 28, and 29, on some of the review records, were not completed:

- AP-2.1Q, Revision 3, ICN 0, *Personnel Training and Qualification*
- AP-2.14Q, Revision 3, ICN 0, *Document Review*
- LP-4.5Q-BSC, Revision 4, ICN 0, *Requisitions and Procurement Documents*
- AP-3.11Q, Revision 4, ICN 0, *Technical Reports*
- AP-6.28Q, Revision 0, ICN 2, *Document Review*
- AP-16.1Q, Revision 7, ICN 0, *Condition Reporting and Resolution*

3.1.2.3 CR 1418 – Condition with AP-5.1Q, Revision 3, ICN 4 or Older

The audit team found four instances (one CDA) in the four procedures sampled for this ICN.

Requirement: AP-5.1Q, Revision 3, ICN 4, Section 5.5.4, paragraph a) 1), states that a response from the procedure preparer is required for all mandatory comments.

Condition: One mandatory comment did not have a response documented on the comment sheet for the review of AP-SIII.3Q, Revision 2, ICN 0, *Submittal and Incorporation of Data/Technical Information to the Technical Data Management System*.

Requirement: AP-5.1Q, Revision 3, ICN 4 or older, states that the USGS shall review procedures that affect the USGS.

Condition: The following procedures that affect the USGS were not reviewed by the USGS:

- AP-3.20Q, Revision 2, ICN 0, *Design Verification*
- AP-2.14Q, Revision 3, ICN 0, *Document Review*

Requirement: AP-5.1Q, Revision 3, ICN 4, Attachment 8, Instructions for the Document Development Form, requires the preparer to identify any additional DARs closed upon completion of the activity.

Condition: The change history for AP-SIII.9Q, Revision 2, ICN 0, *Scientific Notebook*, indicates that the following DARs were incorporated: D10476, D7774, D10066, D10517, and D10728. The Document Development Form for this procedure change states that only DARs D07774 and D10476 were incorporated. This condition was CDA. The audit team concluded that an extent of condition should be performed.

3.1.2.4 CR 1419 – Condition with AP-5.1Q, Revision 3, ICN 4 or Newer

The audit team found one instance of an adverse condition in each of the nine sampled procedures.

Requirement: AP-5.1Q, Revision 3, ICN 4 or newer, states that the USGS shall review procedures that affect the USGS.

Condition: The following procedures that affect the USGS were not reviewed by the USGS:

- AP-SI.1Q, Revision 5, ICN 2, *Software Management*
- AP-SI.3Q, Revision 1, ICN 1, *Software Independent Verification and Validation*
- AP-SI.4Q, Revision 0, ICN 2, *Independent Verification and Validation of Legacy Code*
- AP-3.20Q, Revision 2, ICN 0, *Design Verification*

Requirement: AP-5.1Q, Revision 4, ICN 0 and ICN 1, Section 5.4.2, paragraph [1], requires the responsible manager to acquire a signature from the Approving Official. The Approving Officials for an AP are the BSC General Manager and either the OCRWM Director or the Deputy Director.

Condition: The following APs were not approved by the BSC General Manager, and were not approved by either the OCRWM Director or the Deputy Director:

- AP-3.13Q, Revision 3, ICN 2, *Design Control*
- AP-3.19Q, Revision 2, ICN 4, *Specifications*
- AP-3.24Q, Revision 1, ICN 1, *Drawings*

Requirement: AP-5.1Q, Revision 4, ICN 0 or newer, Section 5.2.1 [5] requires applicable DARs be incorporated during the initial preparation, revision or ICN of a procedure.

Condition: DAR 9550 was not incorporated into the last revision of AP-SI.2Q. This DAR was “Accepted – Action Authorized” on 6/24/2003 prior to the approval date of the procedure on 8/28/2003.

Requirement: AP-5.1Q, Revision 4, ICN 3, Section 5.1.1, paragraph [7] and Attachment 8, Section 2, line 11, states that the procedure preparer to initiate a DAR for a change to an interfacing procedure when the change is required to effective concurrent with the revision or ICN to a procedure.

Condition: The Document Development Form for AP-SV.1Q, Revision 1, ICN 0, required an interfacing procedure, AP-5.1Q, to be effective concurrently. There was no objective evidence found that the required DAR was initiated.

3.1.2.5 CR 1420 – Condition with AP-5.1Q, Revision 4, ICN 0 or Newer

The audit team found two adverse conditions in the single procedure sampled under this ICN.

Requirement: AP-5.1Q, Revision 4, ICN 2, Attachment 6, states that procedure preparer to list the procedures used to complete the process outlined in the procedure to be developed.

Condition: AP-16.1Q, Revision 7, ICN 0, *Condition Reporting and Resolution*, misidentifies two procedure references:

- AP-2.14Q, *Document Review*, is misidentified as “Review of Technical Products and Data”
- LP-16.5Q-BSC, *Managing Supplier Condition Reports*, is misidentified as “Subcontractor/Vendor Conditions Adverse to Quality”

3.1.2.6 CR 1421 – Condition with AP-5.1Q, Revision 4, ICN 1 or Newer

Of the 22 procedures sampled, the audit team found 3 instances of conditions.

Requirement: AP-5.1Q, Revision 4, ICN 1 or newer, Attachment 3 defines an AP as a procedure implemented by both OCRWM and BSC. A LP is a procedure that is implemented by either OCRWM or BSC (includes National Laboratories and USGS).

Condition: The applicability sections of the following three procedures define the scope as being limited to the BSC line organizations:

- AP-3.13Q, Revision 3, ICN 2
- AP-3.19Q, Revision 2, ICN 4
- AP-3.24Q, Revision 1, ICN 1

3.1.3 Conditions Adverse to Quality (Level C)

None

3.1.4 Opportunities for Improvement (Level D)

3.1.4.1 CR 1417 – RTN Matrix Clean-Up

The audit team identified 26 discrepancies in the RTN matrices for the 36 sampled procedures. The discrepancies were determined not to be quality-affecting because the QARD requirements were still found to be implemented appropriately. Seven of the discrepancies were corrected during the audit.

The audit team recommends the following:

1. The RTN 040 matrix for AP-16.1Q, Revision 7, ICN 0, should reference QARD Section 1.2.5.
2. The RTN 040 matrix report for the current version of AP-6.1Q does not reflect the latest ICN. The report lists the requirements for AP-6.1Q, Revision 7, ICN 1, rather than those for Revision 7, ICN 2. The RTN 040 report was revised during the audit. The audit team verified the revision.
3. The RTN 040 matrix report for AP-2.14Q, Revision 3, lists procedure Section 5.1 as implementing QARD Section 2.2.10, paragraph A. The wording in procedure Section 5.1 refers to Attachment 4 of the procedure that was found by the audit team as implementing the QARD Section. Attachment 4 of the procedure is also listed in the RTN report as implementing the QARD Section 2.2.10, paragraph A. The audit team recommends that the next revision of this matrix only list Attachment 4 as implementing QARD Section 2.2.10, paragraph A.
4. The audit team recommends that the next revision to AP-2.14Q have the definition of reviewer in Attachment 3, Definitions, specified in Attachment 4, item 5, as guidance for selecting the reviewers.
5. The RTN 040 matrix report for AP-SIII.1Q, Revision 2, ICN 0, *Scientific Notebooks*, references procedure Section 5.3.1, paragraph a, to satisfy QARD Supplement III, Section III.2.B.1, Supplement III.2.B.2 and Supplement III.2.B.3. The audit team determined that procedure Section 5.3.1 paragraph a, is the actual implementing procedure section. The RTN 040 report was revised during the audit. The audit team confirmed the revision.
6. The RTN 040 matrix report for AP-SIII.9Q, Revision 1, ICN 1, *Scientific Analysis*, references procedure Section 5.4 to satisfy QARD Supplement III, Section III.2.5. The audit team determined that procedure Section 5.3 is the actual implementing procedure section. The RTN 040 report was revised during the audit. The audit team confirmed the revision.
7. The RTN 040 matrix report for AP-SIII.10Q, Revision 2, ICN 0, *Models*, references procedure Section 3.27 to satisfy QARD Supplement III, Section III.2.6, paragraph B. The audit team determined that there is no such section in the procedure. The RTN 040 report was revised during the audit. The audit team confirmed the revision.
8. The RTN 040 matrix report for AP-7.4Q, Revision 5, ICN 4, references procedure Section 5.1 to satisfy QARD paragraphs 7.2.3 A, 7.2.3 D, 7.2.3 E, and 18.2.2 D. These requirements were not addressed in procedure Section 5.1.
9. The RTN 040 matrix report for AP-3.13Q, Revision 3, ICN 2, *Design Control*, references procedure Section 5.3 to satisfy QARD Section 3.2.9, paragraphs E) and F). The audit team determined that procedure Section 5.1.3 is the actual implementing procedure section. In addition, this procedure section is identified as implementing QARD Section 3.2.1, but this

linkage was unclear to audit team. It was recommended that the RTN for AP-3.13Q be updated to reflect where the procedure meets those QARD requirements. The RTN was modified during the audit to address this issue. The audit team confirmed the modification of the RTN.

10. The RTN 040 matrix report for AP-6.1Q, Revision 7, ICN 1, *Document Control*, specifies that QARD Section 6.2.1 is implemented in procedure Section 5.0. The audit team has determined that procedure Section 5.1 should be indicated on the matrix.
11. The RTN 040 matrix report for AP-3.12Q, Revision 4, ICN 0, *Design Calculations and Analyses*, lists the following QARD requirements as being implemented in procedure Sections 5.1, 5.2, and 5.3:
 - The requirements of QARD, Section 3.2.2, paragraph A, could not be confirmed in procedure Sections 5.1, 5.2, and 5.3.
 - The requirements of QARD, Section 3.2.2, paragraph B, could not be confirmed in procedure Section 5.1.
 - The requirements of QARD, Section 3.2.2, paragraph E, could not be confirmed in procedure Sections 5.1 and 5.2.
 - The requirements of QARD, Section 5.2, could not be confirmed in procedure Sections 5.1 and 5.2.

The audit team recommends that these QARD sections in the procedure be removed from the matrix for this procedure.

12. The audit team determined that the 040 RTN matrix for LP-4.5Q-BSC should be revised to indicate that QARD Sections 4.2.1 B.1, 4.2.1 B.2, and 4.2.1 B.3 are implemented in procedure Section 5.1. The RTN for LP-4.5Q-BSC was revised during the audit. The audit team confirmed the RTN revision.
13. The RTN 040 matrix report for LP-16.5Q, Revision 0, ICN 0, *Managing Supplier Condition Reports*, contained several errors. The matrix was ready to be issued by Document Control. The matrix was pulled back and corrections were made and verified by the audit team.

3.2 NOTEWORTHY PRACTICES

None

4.0 ATTACHMENTS

Attachment A – Personnel Contacted During the Audit
Attachment B – Summary of Audit Results

Attachment A - Personnel Conducted During the Audit

Name	Organization	Pre-Audit Meeting	Contacted During Audit	Post-Audit Meeting
Duane Allred	BSC/QA	X		
Charles Bartley	BSC/MS		X	
Cyril Bastian	BSC/ES&H		X	
Gerald Boldt	BSC/ATSS	X		X
James E. Clark	BSC/QA	X	X	X
John J. Clark	BSC/MS	X		
George K. Beal	BSC/MS	X		
Debra J. Clarke	BSC/ATSS	X	X	X
Larry D. Croft	BSC/ES&H	X		
Denise Gibson	BSC/PP&P		X	
Gary Grant	BSC/QA		X	
Robert Habbe	BSC/QA	X	X	X
Robert Hartstern	BSC/QA		X	X
Bill Holub	BSC/QA	X	X	X
Martha Johnson	BSC/RM		X	
Dan Klimas	BSC/QA		X	
Michael Mason	BSC/QA			X
Vincent Mattes	BSC/TPI			X
John Peters	BSC/MS/M&P	X		X
Thomas Rodgers	BSC/M&P			X
Barbara Rusinko	BSC/DE		X	
Frank Sanda	BSC/QA	X		X
John Slack	BSC/OA	X		
Dennis Sorenson	BSC/OA			X
Steve Swenning	BSC/OA			X
Michael Sullivan	BSC/ES&H		X	X
Kathleen Thompson	BSC/RC		X	
Dan Tunney	BSC/QA		X	
Jim Whitcraft	BSC/MS	X		X
Ken Wolverson	BSC/ES&H	X		X
Jean Younker	BSC/CSO	X		X
Marshall Bishop	MTS	X		
Deborah Kirby	MTS	X	X	X
Robert Latta	NRC			X
Jack Parrott	NRC	X		
Roy Capshaw	OQA			X
Micheal Ulshafer	OQA			X
Dave Warriner	ORD/OPS	X		X

Legend:

ATSS - Administrative & Technical Support Services
DE - Design & Engineering
OA - Organization Assurance
MS - Management Systems
NRC - Nuclear Regulatory Commission
ORD - Office of Repository Development
PP&P - Policies, Plans & Program Procedures
RM - Records Management
QA - Quality Assurance

CSO - Chief Science Office
ES&H - Environmental Safety & Health
M&P - Management & Procedures
MTS - Management Technical Support
OPS - Office of Project Support
OQA - Office of Quality Assurance
RC - Records Control
TPI - Technical Product Input

Attachment B - Summary of Audit Results

Doc Number	Revision	Document Title	Condition Report(s)	QARD Flowdown	AP-5.1 Compliance
AP-2.1Q	3	Personnel Training and Qualification	1416	Satisfactory	Satisfactory
AP-2.14Q	3	Document Review	1416, 1418, 1418	Satisfactory	Satisfactory
AP-2.20Q	1, ICN 1	Self-Assessments		Satisfactory	Satisfactory
AP-3.11Q	4	Technical Reports	1416	Satisfactory	Satisfactory
AP-3.12Q	2, ICN 1	Design Calculations and Analyses	1415, 1417	Unsatisfactory	Satisfactory
AP-3.13Q	3, ICN 2	Design Control	1416, 1417, 1419, 1421	Satisfactory	Satisfactory
AP-3.15Q	4, ICN 2	Managing Technical Product Inputs	1416	Satisfactory	Satisfactory
AP-3.19Q	2, ICN 4	Specifications	1416, 1419, 1421	Satisfactory	Satisfactory
AP-3.20Q	2	Design Verification	1418, 1419	Satisfactory	Satisfactory
AP-3.24Q	1, ICN 1	Drawings	1415, 1416, 1419, 1421	Unsatisfactory	Satisfactory
AP-5.1Q	4, ICN 3	Procedure Preparation, Review, and Approval		Satisfactory	Satisfactory
AP-6.1Q	7, ICN 2	Document Control	1416, 1417	Satisfactory	Satisfactory
AP-6.28Q	0, ICN 2	Document Review	1416	Satisfactory	Satisfactory
AP-7.4Q	5, ICN 4	Supplier Evaluation and Qualified Suppliers List (QSL)	1417	Satisfactory	Satisfactory
AP-7.7Q	2	Acceptance of Items and Services	1415	Unsatisfactory	Satisfactory
AP-16.1Q	7	Condition Reporting and Resolution	1416, 1417, 1420	Satisfactory	Satisfactory
AP-17.1Q	3	Records Management		Satisfactory	Satisfactory
AP-18.1Q	0	Audit Personnel Qualification		Satisfactory	Satisfactory
AP-18.2Q	0, ICN 2	Supplier Surveys/Audits	1415	Unsatisfactory	Satisfactory
AP-18.3Q	0, ICN 1	Internal Audit Program		Satisfactory	Satisfactory
AP-SI.1Q	5, ICN 2	Software Management	1416, 1419, 1421	Satisfactory	Satisfactory
AP-SI.2Q	1, ICN 1	Qualification of Level A Software	1416, 1419, 1421	Satisfactory	Satisfactory
AP-SI.3Q	1, ICN 1	Software Independent Verification and Validation	1416, 1419, 1421	Satisfactory	Satisfactory
AP-SI.4Q	0, ICN 2	Independent Verification and Validation of Legacy Code	1416, 1419, 1421	Satisfactory	Satisfactory
AP-SIII.1Q	2	Scientific Notebooks	1416, 1417	Satisfactory	Satisfactory
AP-SIII.2Q	1, ICN 1	Qualification of Unqualified Data	1415, 1416	Unsatisfactory	Satisfactory
AP-SIII.3Q	2	Submittal and Incorporation of Data/Technical Information to the Technical Data Management System	1415, 1416, 1418	Unsatisfactory	Satisfactory
AP-SIII.4Q	0, ICN 5	Development, Review, Online Placement, and Maintenance of Individual Reference Information Data Items	1416	Satisfactory	Satisfactory
AP-SIII.9Q	1, ICN 1	Scientific Analyses	1417, 1418	Satisfactory	Satisfactory
AP-SIII.10Q	2	Models	1417	Satisfactory	Satisfactory
AP-SV.1Q	1	Control of the Electronic Management of Information	1416, 1419, 1421	Satisfactory	Satisfactory
LP-1.0Q-BSC	3	Organization		Satisfactory	Satisfactory
LP-4.3Q-BSC	0, ICN 4	Subcontracts	1416	Satisfactory	Satisfactory
LP-4.4Q-BSC	0, ICN 4	Technical Service Agreements		Satisfactory	Satisfactory
LP-4.5Q-BSC	4	Requisitions and Procurement Documents	1417	Satisfactory	Satisfactory
LP-16.5Q-BSC	0	Managing Supplier Condition Reports	1417	Satisfactory	Satisfactory
OVERALL				Satisfactory	Satisfactory

Attachment C - Condition Report Summary

CR # (Level)	Description of Requirement	Sample Size	# of Errors	In # of Procedures
1415 (B)	QARD, Revision 13, flow-down of requirements into procedures	36	12	6
1416 (B)	Review records/comment sheets not process in accordance with AP-5.1Q	36	22 (5 CDA)	22
1417 (D)	RTN Matrix (040 report) linking the QARD requirement to the subsection or attachment of the procedures	36	26 (7 CDAs)	11
1418 (B)	AP-5.1Q, Revision 3, ICN 9, or newer versions, require a response to all mandatory comments, USGS review procedures that affect USGS, and Document Development Form addresses DARs	4	4 (1 CDAs)	4
1419 (B)	AP-5.1Q, Revision 4, ICN 0, or ICN 1, requires USGS review of procedures that affect USGS, procedural approval by OCRWM Deputy Directory and President General Manager, BSC, incorporation of DAR "accepted" - action authorized, and initiate DAR to change interfacing procedure when change is to be concurrent.	9	9	9
1420 (B)	AP-5.1Q, Revision 4, ICN 3, requires the procedure prepare to list procedures used to complete the process outline in the procedure to be developed.	1	2	1
1421 (B)	AP-5.1Q, Revision 4, ICN 0 thru ICN 3, defines an AP procedure that is implemented by both OCRWM and BSC. (The procedure applicability section defines scope as limited to BSC.)	22	3	3